modified version of the stop distance paradigm with HRV measurement controlling for eye contact between the experimenter and the participant to measure interpersonal distance in incidental and intentional conditions.
Results: Our results showed greater preferred distance in ASD in the intentional (W=103, p=0.002) but not in the incidental condition. These results were altered with eye contact and the participant's role (active vs. passive) in the stop distance task (F(1,41) =6.150, p=0.017). Moreover, we found lower baseline HRV (t=-2.060, p=0.023) and reduced HRV reactivity in ASD; however, these vegetative measurements could not predict preferred interpersonal distance.
Conclusions: Our study highlights the importance of interpersonal distance regulation in ASD and the need for comprehensive experimental designs to grasp the complexity and underlying factors of distance regulation in typical and atypical populations.

Disclosure: No significant relationships.
Keywords: personal space; Autism Spectrum Disorder; interpersonal distance; heart rate variability

EPV1213

Is the pursuit of happiness the pursuit of homeostasis? A review on the modulatory functions of endorphins on human behavior.

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Introduction: Endorphins have been associated with analgesia and pleasurable activities. However, the so-called "happy chemicals" are far more complex than initially thought. Research shows that their impact on human behavior is modulatory, with the main goal not being "happiness" but a "return to the most desirable state" – which can be highly context-dependent.
Objectives: Review of the modulatory functions of endorphins on human behavior and their possible implications in psychiatric conditions.
Methods: Pubmed search consisting of the MeSH terms "Endorphins", "Opioid Peptides", "Behavior", and "Psychiatry".
Results: Endorphins elicit pleasure via stimulation of the release of dopamine from the ventral tegmental area to the *nucleus accumbens*. They are known to be involved in analgesia and stress response and social interaction. Endorphins can be released in a multitude of circumstances that may seem contradictory – having both inhibitory and stimulating roles in appetite, sexual response, and memory– but are modulatory effects depending on what constitutes homeostasis in each context. Peripheral levels of endorphins have been found low in depression and post-traumatic stress disorder. In schizophrenia, studies suggest that peripheral levels are high during psychosis, low in chronic disease and that naltrexone seems to improve auditory hallucinations. Endorphins may also have a role as markers of treatment response.
Conclusions: Endorphins have a complex role in behavior and homeostasis. These molecules could have implications in psychiatry- given that they are part of our stress response and are released to promote a more "desirable state". Their role as a marker of illness or response to treatment needs further investigation.

Disclosure: No significant relationships.
Keywords: endorphins; endogenous opioids; human behavior

EPV1215

The path to function: using eye-tracking in a real-world task to understand the performance gap for people with severe mental illness.

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Introduction: Individuals with severe mental illnesses (SMI) often present the knowledge about a task but in real-time do not perform it fully, or not as efficient as planned. This performance gap may be explained by difficulties with Executive Functions (EF).
Objectives: The aim of the presentation is to describe how people with and without SMI experience and perform grocery task. This, with considering this path from several directions including the subjects' point of view using eye-tracking device during task performance.
Methods: Forty-three individuals had answered questions in regards to their shopping habits and performed the Test of Grocery Shopping Skills (TOGSS). The actual performance was accompanied by wearing an eye-tracking device which recorded the behavior and eye movement. We hypothesized that significant differences will be found between people with SMI and controls both in the routine grocery habits and in observed performance.
Results: No significant differences in age or gender. The groups differed significantly only in education, with the SMI group having fewer years of education. As a weekly routine, SMI subjects perform less frequent shopping (40%) than control group subjects (67%). TOGSS sub-outcomes indicated performance efficiency (time and redundancy) were significantly higher in the research group than in the matched control group ($p < .01$), with the SMI group spending a longer time performing the task and entering more aisles than required – redundancy.
Conclusions: These preliminary findings indicate that individuals with SMI spend more time dwelling while selecting ingredients. Besides the path in the supermarket, it might explain their performance in other everyday activities.

Disclosure: No significant relationships.
Keywords: Translational research; Grocery shopping; SMI; Executive function

EPV1216

Perceived stress and physiological consistency during mental stress exercises and controlled breathing

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Introduction: The measurement of the physiological coherence, the order and the quality of the connection of complex systems such as the cardiac and the respiratory system, varies in situations of stress and relaxation.
Objectives: We aim to assess changes in physiological coherence and perception of stress during mental stress and directed breathing exercises.
Methods: Repeated-measures study in healthy adults without prior training in breathing techniques, aged between 18 and 65 years of both sexes who were evaluated in three situations: baseline, mental stress (Stroop test and successive subtractions), and directed breathing, during which were captured heart rate and respiratory signals to estimate physiological coherence and the participants rated the perceived stress at each moment.
Results: 34 participants were analyzed, 59% women, with a median age of 36 years (Rq = 13). During mental stress tasks, the median for physiological coherence was similar to baseline coherence but increased significantly with five minutes of directed breathing exercises (38% vs. 63% p <0.0001). The highest perception of stress was during successive subtractions (Me 7, Rq = 4) and the lowest during directed breathing exercises (Me 2 Rq = 3.0). The correlation was sought between physiological coherence and perception of stress during each of the four moments of the study. Basal (Rho Spearman -0.05, p 0.54); Stroop (Rho -0.17, p 0.03); successive subtractions (Rho 0.50, p 0.77); and directed breathing (Rho -0.28, p 0.09).
Conclusions: A correlation was found between physiological coherence and perception of stress during the Stroop test; however, no association was found.

Disclosure: No significant relationships.
Keywords: Emotional stress; Physiological; Breathing exercises; Heart rate

EPV1217

Non-invasive vagus nerve stimulation attenuates the burnout

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Introduction: Vagus nerve stimulation produces therapeutic effects for the treatment of psychiatric disorders, heart failure, and others.
Objectives: The aim of the current study was to evaluate the effects of the non-invasive vagus nerve stimulation on emotional burnout.
Methods: 6 right-handed male volunteers aged 18-22 years participated in study. We used the combination of pleasant meditative classical music and a slow bi-polar wave (0.1-0.2 Hz) of electrical non-invasive transcutaneous auricular vagus nerve stimulation for 5 minutes. The set of 4 VNS was performed at intervals of 3 days. EEG was registered during the rest state (3 min, closed eyes condition). To measure the severity of emotional burnout in students, we used the 22-item Maslach Burnout Inventory (MBI).
Results: VNS significantly improve the depersonalization and reduction of personal achievements (components of the emotional burnout). Changes in the psychoemotional state of the respondents were accompanied by the increase in the theta-Fz/alpha-Pz ratio, that reflects an enhancement of the activation level. A set of non-invasive stimulation of the auricular branch of the vagus nerve leads to an increase in the level of activation (the ratio of beta / alpha rhythms). The changes in the power of the alpha rhythm may relate to improving of mental process, creativity, creative thinking. An increase in alpha rhythm may reflect internally oriented attention in creative activities.
Conclusions: The preliminary data suggests that the novel mastoid stimulation device may have a prolonged stimulating effect on the brain processes while attenuating the burnout at the same time.

Disclosure: No significant relationships.
Keywords: EEG; burnout; neuromodulation; vagus nerve stimulation

EPV1218

Estradiol and Progesterone as key modulators of central systems implicated in schizophrenia.

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Introduction: It has been suggested that dysregulation of sex hormones is associated with schizophrenia. However, obesity and metabolic syndrome are very common between schizophrenic patients, and it can also dysregulate sex hormones so they could act as confounders.
Objectives: To determine if estradiol and progesterone are abnormally elevated regardless of obesity or metabolic syndrome in men with SCZ.
Methods: We measured serum levels of progesterone and estradiol in 56 schizophrenic male patients at treatment with a depot antipsychotic. Subsequently, we studied the association or independence of our results with obesity or metabolic syndrome by a Chi Square Test.
Results: 66.07% of our patients elevated progesterone levels, 19.64% of our patients elevated estradiol levels, and 16.07% of our patients elevated both, progesterone and estradiol, simultaneously. We found no relationship between increased estradiol and / or progesterone with obesity and / or metabolic syndrome.
Conclusions: Estradiol and progesterone are abnormally elevated regardless of obesity and / or metabolic syndrome in male schizophrenic patients on depot treatment.

Disclosure: No significant relationships.
Keywords: schizophrénia; progesterone; estradiol; endocrinology

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